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EXAMINER	
FIGUEROA, MARISOL	
ART UNIT	**PAPER NUMBER**
2617	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/803,032	ELLIOTT, BRIG BARNUM	
	Examiner	Art Unit	
	MARISOL FIGUEROA	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5-10,13-18,22-32,34 and 36-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5-10,13-18,22-32,34,36,37,41-44 and 48-55* is/are rejected.

7)☒ Claim(s) *38-40 and 45-47* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/07/2010 has been entered.

Response to Arguments

2. Applicant's arguments filed 10/01/2010 have been fully considered but they are not persuasive.

The Applicant argues that:

"Gerszberg (US 6,714,534) as well as the other references does not disclose that its relay transceiver 2503 (Gerszberg, Fig. 25) interfaces with a subscriber network. The only arguable subscriber network shown in Gerszberg is identified by ISD22/IRG22~1 representing: Intelligent Services Director/Integrated Residence Gateway, {Gerszberg, Fig, 25; col. 4, line 46 and col. 3, line 4) .In Gerszberg, Fig. 25, only wireless communication station 2502 can be viewed as arguably interfacing with subscriber network ISD:22/IRG22-1. Wireless transceiver 2503 is placed at tap 60"' (Gerszberg, col. 33, line 52) which is not the disclosed subscriber network nor any other subscriber network, but is part of the network service provider's Upstream infrastructure. The tap lies on the upstream side of cable 30 which, in turn., is on the upstream side of protector block 26. (Gerszberg, Figs. 1A and 25) Notably, protector block 26 is the line of demarcation between the upstream *infrastructure and* the "premises." (Gerszberg, cot, 17, lines 10-1:2; col. 14, lines 20-21) Thus the transceiver at wireless communication station 2503 is not interfacing with a subscriber network within subscriber premises, but is connected to upstream infrastructure.

Completing the Gerszberg transceiver picture, wireless transceiver 2501 is hardwired to C-FMP 32-1 (Cable Facilities Management platform) located at the network service provider's central office. (Gerszberg, Fig. 25; col. 5, lines 7-8) Thus, wireless

transceiver 2501 also does not interface with a subscriber network within subscriber premises." (see pages 23-24 of Applicant's arguments).

The Examiner respectfully disagrees. According to the specification a subscriber network includes the subscriber physical location, such as a home or business (see page 7, paragraph [0030] of the specification). Gerszberg teaches the different locations that the transceivers for providing a wireless lifeline service to each of the subscriber houses, for example, wireless transceiver 2502 can be placed, for example, at every ISD 221/IRG 22-1 or ***integrated within every ISD 221/IRG 22-1*** so that each house is separately enabled to communicate with the remaining network (see col. 33, lines 34-41). Since every ISD 221/IRG 22-1 interfaces or is part of each house, the wireless transceivers 2502 interfaces with a subscriber network since according to the specification a subscriber network includes a home.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1, 3, 5, 9, 28, 30-32, 37, 43, 44, are 50-55** are rejected under 35 U.S.C. 103(a) as being unpatentable over FARRIS et al. (US 5,751,789) in view of GERSZBERG et al. (US 6,714,534).

Regarding claim 1, Farris discloses a device (Smart Network Interface Device SNID or wireless-to-landline interface), connected to and interfacing for enabling network connectivity of said subscriber with a network service provider, the device comprising:

a wireless transceiver (Fig. 2; Cellular Transceiver 51);

an antenna coupled to the wireless transceiver (Fig. 2; Antenna 25); and

a switch interfacing with said subscriber network, said switch being coupled to the wireless transceiver and to a wireline network (Fig. 2; col.2, lines 42-45 and 55-59; col. 6, lines 31-34; **the switch 45 connects to the active twisted wire pair of the customer premises/house wiring**, thus the switch interfaces the subscriber network (i.e., house)),

the switch exchanging data between said interfaced subscriber network and the network service provider over the wireline network during normal operation and also exchanging data with the network service provider via the wireless transceiver when the connectivity is lost on the wireline network (Fig. 1; col.3, lines 9-45; col. 3, line 65-col.4, lines 1-36; col.6, line 31-col. 7, lines 1-46; col.8, lines 54-62; the switch has two latched states, normal line-connected state (1) in which the switch is connected to the active wired telephone line 17 from the customer premises to the end office switch 11 (i.e., network service provider) and changes to a second state (2) in where the active twisted pair (or wired telephone line) is connected to the landline-to-cellular/wireless interface (i.e., wireless communications) when a fault is detected, thus the switch connects the customer premises with the end office switching system 11 (i.e., network service provider) using the cellular/wireless transceiver);

due to a problem in a residence or place of business of a network subscriber (see abstract; col. 4, lines 56-61).

But, Farris does not particularly disclose wherein the wireless transceiver is configured to relay data from another wireless transceiver interfacing with another subscriber network that has lost said connectivity on the wireline network, said another wireless transceiver being connected to said wireless transceiver through no more than one other wireless transceiver interfacing with

one other subscriber network that has also lost said connectivity to the wireline network when said data is being relayed, said another and said one other wireless transceivers having been wireline-connected to the wireline network during normal operation.

However, Gerszberg teaches a wireless transceiver configured to relay data from another wireless transceiver that has lost connectivity on the wireline network, said another wireless transceiver being connected to said wireless transceiver through no more than one other wireless transceiver that has also lost connectivity to the wireline network when said data is being relayed, said another and said other wireless transceivers having been wireline-connected to the wireline network during normal operation (Fig. 25; abstract; col. 20, lines 53-59; col. 33, lines 34-col. 34, lines 1-24; a wireless transceiver can be placed at every integrated residence gateway ISD/IRG at customer houses (i.e., subscriber networks), so, when for example the communication of ISD 221/IRG 22-1 is lost, the transceiver 2502 becomes active to communicate with the C-FMP (i.e., service provider) through path 2506, but if path 2506 cannot be established, then it can establish a path to the C-FMP from transceiver 2502 (i.e., the another transceiver) to transceiver 2503 (i.e., the one other transceiver) and from transceiver 2503 to transceiver 2501 (i.e., said wireless transceiver); furthermore, the transceivers can relay or establish wireless connection with a transceiver that is located a long distance (i.e., remotely) through transceivers connected to interfaces/taps that have been disconnected from the network (see col. 34, lines 3-24, example with taps), note that although Gerszberg teaches an embodiment with multiple disconnected taps and transceivers located at taps, one of ordinary skill in the art would recognize that include the possibility of just two disconnected taps (i.e., transceivers) and this example would work equally well when locating the transceivers at the residence gateways

at every house). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify Farris to configure the wireless transceiver to relay data from another wireless transceiver that has lost connectivity on the wireline network, said another wireless transceiver being connected to said wireless transceiver through no more than one other wireless transceiver that has also lost connectivity to the wireline network when said data is being relayed, said another and said other wireless transceivers having been wireline-connected to the wireline network during normal operation, as suggested by Gerszberg, since such a modification would provide the advantage for the subscribers to re-establish the communications with the service provider via alternative wireless paths when loosing their direct connection (i.e., primary wireline connection) with the service provider and when located a long distance from the service provider.

Regarding claim 3, the combination of Farris and Gerszberg disclose the device of claim 1, in addition Gerszberg discloses wherein the wireless transceiver relays data from the other wireless transceivers that have lost connectivity by forwarding data units from the other wireless transceivers through the switch and to the wireline network (col. 34, lines 10-24).

Regarding claim 5, the combination of Farris and Gerszberg disclose the device of claim 1, in addition Farris discloses wherein the device is physically located at a location of a subscriber of the network service provider (col.4, lines 18-21).

Regarding claim 9, the combination of Farris and Gerszberg disclose the device of claim 1, in addition Farris discloses wherein the switch monitors a failed connection state of the wireline network for renewed connectivity of the wireline network and resumes communication over the wireline network when the wireline connection is renewed (col.10, lines 41-56).

Regarding claim 28, Farris discloses a network comprising:

wireline connections to a plurality of subscribers locations, each location having a respective subscriber network (note that it is conventional and well known in the art to provide wireline connections/services to a plurality of subscriber's houses);

a different network interface unit (NIU) located at and interfacing with, the respective subscriber network at each one of the plurality of subscriber locations (col.2, lines 40-45; col.4, lines 18-21; note that it is inherent to recognize when there is a plurality of wireline subscribers there will be a plurality of network interface units (i.e. SNID), one located at each subscriber premises/network), each NIUs including:

a wireless transceiver (col.4, lines 26-28; Fig. 2; Cellular Transceiver 51); and

a switch coupled to the wireless transceiver and to one of the wireline connections (Fig. 2; col.2, lines 42-45 and 55-59; Switch 45), the switch providing data from one of the wireline connections to a corresponding subscriber of the subscriber network during normal operation of the one of the wireline connections and the switch providing data from the wireless transceiver to the corresponding subscriber of the subscriber network when connectivity on the one of the wireline connections fail (Fig. 1; col.3, lines 9-45; col. 3, line 65-col.4, lines 1-36; col.6, line 31-col. 7, lines 1-46; col.8, lines 54-62; the switch has two latched states, normal line-connected state (1) in which the switch is connected to the active wired telephone line 17 from the customer premises to the end office switch 11 (i.e., network service provider) and changes to a second state (2) in where the active twisted pair (or wired telephone line) is connected to the landline-to-cellular/wireless interface (i.e., wireless communications) when a fault is detected, thus the

switch connects the customer premises with the end office switching system 11 (i.e., network service provider) using the cellular/wireless transceiver),

due to a problem in a residence or place of business (due to a problem in a residence or place of business of a network subscriber (see abstract; col. 4, lines 56-61).

But, Farris does not particularly disclose wherein the wireless transceiver interfacing with its respective subscriber network is configured to relay data directly from another wireless transceiver in another NIU interfacing with its respective another subscriber network to which its respective one of said wireline connection has failed, the another wireless transceiver relaying said data directly from yet another transceiver in yet another NIU interfacing with its respective yet another subscriber network that is wireline-connected to the wireline network.

However, Gerszberg teaches wherein the wireless transceiver is configured to relay data directly from another wireless transceiver in another NIU to which its respective one of said wireline connection has failed, the another wireless transceiver relaying said data directly from yet another transceiver in yet another NIU that is wireline-connected to the wireline network (Fig. 25; abstract; col. 20, lines 53-59; col. 33, lines 34-col. 34, lines 1-24; a wireless transceiver can be placed at every integrated residence gateway ISD/IRG at customer houses (i.e., subscriber networks), so, when for example the communication of ISD 221/IRG 22-1 is lost, the transceiver 2502 becomes active to communicate with the C-FMP (i.e., service provider) through path 2506, but if path 2506 cannot be established, then it can establish a path to the C-FMP from transceiver 2502 (i.e., the another transceiver) to transceiver 2503 (i.e., the one other transceiver) and from transceiver 2503 to transceiver 2501 (i.e., said wireless transceiver); furthermore, the transceivers can relay or establish wireless connection with a transceiver that is located a long

distance (i.e., remotely) through transceivers connected to interfaces/taps that have been disconnected from the network (see col. 34, lines 3-24, example with taps), note that although Gerszberg teaches an embodiment of transceivers located at taps, one of ordinary skill in the art would recognize that this example would work equally well when locating the transceivers at the residence gateways at every house (i.e., subscriber network)). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify Farris to configure the wireless transceiver is configured to relay data directly from another wireless transceiver in another NIU to which its respective one of said wireline connection has failed, the another wireless transceiver relaying said data directly from yet another transceiver in yet another NIU that is wireline-connected to the wireline network , as suggested by Gerszberg, since such a modification would provide the advantage for the subscribers to re-establish the communications with the service provider via alternative wireless paths when loosing their direct connection (i.e., primary wireline connection) with the service provider and when located a long distance from the service provider.

Regarding claim 30, the combination of Farris and Gerszberg disclose the network of claim 28, in addition Farris discloses wherein the NIUs each additionally include an antenna coupled to the wireless transceiver (Fig. 2; Antenna 25).

Regarding claim 31, the combination of Farris and Gerszberg disclose the network of claim 28, in addition Knight discloses wherein the wireless transceiver is configured to relay data from other wireless transceivers that have lost connectivity with the wireline connections (Fig. 1; paragraphs [0014], [0023], [0025], and [0027]; note that the combination of Farris and Knight

will produce this, additionally see remarks about claim 28 regarding the combination of Farris and Knight above).

Regarding claim 32, the combination of Farris and Gerszberg disclose the network of claim 28, in addition Knight discloses wherein the wireless transceiver relays data from the other wireless transceivers that have lost connectivity by forwarding data units from the other wireless transceivers through the switch and to the wireline network (Fig. 1; paragraphs [0014], [0023], [0025], and [0027]; note that the combination of Farris and Knight will produce this, see remarks about claim 28 above).

Regarding claim 37, Farris discloses a network comprising:

a first wireline connection to a first subscriber location having a first subscriber network; a first subscriber network interface unit (NIU) at the first subscriber location (Fig. 1; SNID 19), the first NIU including:

a first wireless transceiver (col.4, lines 26-28; Fig. 2; Cellular Transceiver 51); and

a first switch coupled to the wireless transceiver and to one of the wireline connections (Fig. 2; col.2, lines 42-45 and 55-59; Switch 45), the first switch providing data communications between the first wireline connection and the first subscriber network during normal operation of the first wireline connection and the first switch providing data communication between the first wireless transceiver and the first subscriber network when connectivity of the first wireline fails (Fig. 1; col.3, lines 9-45; col. 3, line 65-col.4, lines 1-36; col.6, line 31-col. 7, lines 1-46; col.8, lines 54-62; the switch has two latched states, normal line-connected state (1) in which the switch is connected to the active wired telephone line 17 from the customer premises to the end office switch 11 (i.e., network service provider) and changes to a second state (2) in where the

active twisted pair (or wired telephone line) is connected to the landline-to-cellular/wireless interface (i.e., wireless communications) when a fault is detected, thus the switch connects the customer premises with the end office switching system 11 (i.e., network service provider) using the cellular/wireless transceiver).

Farris does not expressly disclose a second subscriber location including a second NIU, however, it is recognized that it is conventional and well known in the art to provide wireline connections/services to a plurality of subscriber's houses and thus each will have a NIU including a wireless transceiver and a switch.

In addition, Farris does not particularly disclose a second wireline connection to a second subscriber location having a second subscriber network, wherein the second subscriber location is remote from the first subscriber location; and a second NIU at the second subscriber location, the second NIU including: a second wireless transceiver; and a second switch coupled to the second wireless transceiver, the second wireline connection and the second subscriber network, the second switch providing data communications between the second wireline connection and the second subscriber network during normal operation of the second wireline connection and the second switch providing data communications between the second wireless transceiver and the second subscriber network when connectivity on the second wireline connections fails; wherein the second wireless transceiver is configured to relay data directly between the first wireless transceiver and the second wireline connection when the first wireline connection has failed.

However, Gerszberg discloses a second wireline connection to a second subscriber location having a second subscriber network, wherein the second subscriber location is remote

from the first subscriber location; and a second NIU at the second subscriber location, the second NIU including: a second wireless transceiver; and a second switch coupled to the second wireless transceiver, the second wireline connection and the second subscriber network, the second switch providing data communications between the second wireline connection and the second subscriber network during normal operation of the second wireline connection and the second switch providing data communications between the second wireless transceiver and the second subscriber network when connectivity on the second wireline connections fails; wherein the second wireless transceiver is configured to relay data directly between the first wireless transceiver and the second wireline connection when the first wireline connection has failed (Fig. 25; abstract; col. 20, lines 53-59; col. 33, lines 34-col. 34, lines 1-24; a wireless transceiver can be placed at every integrated residence gateway ISD/IRG at customer houses (i.e., subscriber networks) which would include a first subscriber network and a second subscriber network, so, when for example the communication of ISD 221/IRG 22-1 is lost, the transceiver 2502 becomes active to communicate with the C-FMP (i.e., service provider) through path 2506, but if path 2506 cannot be established, then it can establish a path to the C-FMP from transceiver 2502 (i.e., first NIU transceiver) to transceiver 2503 (i.e., second NIU transceiver) and from transceiver 2503 to transceiver 2501 to C-FMP (i.e., network service provider); note that although Gerszberg teaches an embodiment of transceivers located at taps, one of ordinary skill in the art would recognize that this example would work equally well when locating the transceivers at the residence gateways at every house (i.e., subscriber network)). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify Farris to include a second wireline connection to a second subscriber location having a second

subscriber network, wherein the second subscriber location is remote from the first subscriber location; and a second NIU at the second subscriber location, the second NIU including: a second wireless transceiver; and a second switch coupled to the second wireless transceiver, the second wireline connection and the second subscriber network, the second switch providing data communications between the second wireline connection and the second subscriber network during normal operation of the second wireline connection and the second switch providing data communications between the second wireless transceiver and the second subscriber network when connectivity on the second wireline connections fails; wherein the second wireless transceiver is configured to relay data directly between the first wireless transceiver and the second wireline connection when the first wireline connection has failed, as suggested by Gerszberg, since such a modification would provide the advantage for the subscribers to re-establish the communications with the service provider via alternative wireless paths when loosing their direct connection (i.e., primary wireline connection) with the service provider and when located a long distance from the service provider.

Regarding claims 44 and 52-55, the claims are rejected over the same reasons of claim 28 since it contains similar subject matter to that of claim 28 (see rejection about claim 28, above).

Regarding claim 51, the claim is rejected over the same reasons of claim 37 since it contains similar subject matter to that of claim 37 (see rejection about claim 37, above).

Regarding claims 43 and 50, the combination of Farris and Gerszberg discloses the system of claims 37 and 50, in addition Farris discloses wherein the first NIU monitors a

connection state of the first wireline connection, and resumes communication over the first wireline connection when the first wireline connection is restored (col.10, lines 41-56).

5. **Claims 6, 41, and 48** are rejected under 35 U.S.C. 103(a) as being unpatentable over FARRIS et al. in views of GERSZBERG et al., and well known prior art (MPEP 2144.05).

Regarding claim 6, the combination of Farris and Gerszberg disclose the device of claim 1, in addition Farris disclose that a variety of wireless transceivers could be used (col.7, lines 13-23), but fails to specifically disclose wherein the wireless transceiver operates in accordance with IEEE 802.11 standards. However, the Examiner takes official notice of the fact that is notoriously well known in the art that the IEEE 802.11 standard is a wireless network technology. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to modify Farris to include a wireless transceiver in accordance with IEEE 802.11 standards, since it is notoriously and well known in the art that that the IEEE 802.11 standard is one of a variety of wireless transceivers used in wireless networks and Farris' invention will perform equally well as with using a cellular transceiver, since Farris indicates that his invention is not restricted to using only a cellular transceiver.

Regarding claims 41 and 48, the combination of Farris and Gerszberg disclose the system of claims 37 and 44, in addition Farris disclose that a variety of wireless transceivers could be used (col.7, lines 13-23), but fails to specifically disclose wherein the first wireless transceiver and second wireless transceiver operates in accordance with IEEE 802.11 standards. However, the Examiner takes official notice of the fact that is notoriously well known in the art that the IEEE 802.11 standard is a wireless network technology. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to modify Farris to

include a wireless transceiver in accordance with IEEE 802.11 standards, since it is notoriously and well known in the art that that the IEEE 802.11 standard is one of a variety of wireless transceivers used in wireless networks and Farris' invention will perform equally well as with using a cellular transceiver, since Farris indicates that his invention is not restricted to using only a cellular transceiver.

6. **Claim 7** rejected under 35 U.S.C. 103(a) as being unpatentable over FARRIS et al. in view of GERSZBERG and EHRETH (US 6,246,750 B1).

Regarding claim 7, the combination of Farris and Gerszberg disclose the device of claim 1, but the combination does not particularly disclose wherein the wireline network includes a fiber network. However, Ehreth teaches that telecommunication systems using fiber optic cable to transmit communication signals are becoming increasingly prevalent due to the enormous advantages that fiber-optic technology provides (col.1, lines 25-31). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the combination in order for the wireline network to include a fiber network, as suggested by Ehreth, because telecommunication systems using fiber optic cables have enormous advantages over copper-wire based systems such as larger bandwidth and improved signal quality.

7. **Claims 8, 42, and 49** is rejected under 35 U.S.C. 103(a) as being unpatentable over FARRIS et al. in views of GERSZBERG et al. and McKENNA et al. (US 6,829,486 B2).

Regarding claim 8, the combination of Farris and Gerszberg disclose the device of claim 1, but the combination does not particularly disclose wherein the wireline network includes coaxial cables. However, McKenna teaches that wirelined-based communications networks such as traditional telephone systems, Local Area Networks, and the like, can use a variety of physical

media to interconnect wired subscribers devices to the wirelined-based communication network and these include: twisted pair, Ethernet, coaxial cable, fiber optic cable, DSL on twisted pair, 4-wire, and the like (col.9, lines 31-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to modify the combination in order for the wireline network to include coaxial cables, as taught by McKenna, because it is conventional and well known in the art that coaxial cables is one of the variety of physical media used to interconnect subscribers in a wirelined-based communication network.

Regarding claims 42 and 49, the combination of Farris and Gerszberg disclose the the system of claims 37 and 44, but the combination does not particularly disclose wherein the first wireline connection and second wireline connection include at least one of a fiber optic cable and a coaxial cable. However, McKenna teaches that wirelined-based communications networks such as traditional telephone systems, Local Area Networks, and the like, can use a variety of physical media to interconnect wired subscribers devices to the wirelined-based communication network and these include: twisted pair, Ethernet, coaxial cable, fiber optic cable, DSL on twisted pair, 4-wire, and the like (col.9, lines 31-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to modify the combination in order for the wireline connections to include coaxial cables, as taught by McKenna, because it is conventional and well known in the art that coaxial cables is one of the variety of physical media used to interconnect subscribers in a wirelined-based communication network.

8. **Claims 10, 17, 18, and 23-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over CARDINA et al. (US 2004/0214569 A1) in view of GERSZBERG et al. (US 6,714,534).

Regarding claim 10, Cardina discloses a method performed by a network subscriber comprising:

establishing wireline-connectivity to a network service provider over a wireline connection as a normal connectivity to a first subscriber network on premises of said network subscriber (Fig. 1; paragraphs [0038], lines 1-9; paragraph [0058]; note that when there is no interruptions in the subscriber's landline/wireline there is a direct landline connection 101 with the network service provider (i.e., public switched network 108));

monitoring the wireline connection for failure (paragraph [0038] lines 1-9, [0058] and [0070]; the backup device 102 monitors and detects service interruption conditions in the customer's landline connection 101 to the landline network); and

when the wireline connection fails due to a problem inside said premises of said network subscriber (abstract; paragraph [0058]), automatically establishing a substitute wireline connection to the network service provider over a wireless connection (Fig. 1; paragraphs [0008], [0012], and [0070]-[0073]; the backup device upon detecting a failure condition in the landline automatically provides backup service to the landline telephone equipment through a wireless telephone (i.e., wireless connection)).

But, Cardina does not particularly disclose wherein the connection to the network service provider is established over a wireless connection relayed from the network subscriber through more than one other subscriber, one said more than one other network subscriber having separate normal wireline-connectivity to the network service provider, said automatically establishing including: (a) providing wireless connectivity directly between a first transceiver associated and interfacing with a second subscriber network of a network subscriber and a second transceiver

associated with a network subscriber other than said one said more than one other network subscriber, and (b) providing wireless connectivity directly between said second transceiver and a third transceiver associated and interfacing with a third subscriber network of said said one said more than one other network subscriber.

However, Gerszberg teaches establishing a connection to the network service provider over a wireless connection relayed from the network subscriber through more than one other subscriber, one said more than one other network subscriber having separate normal wireline-connectivity to the network service provider, said automatically establishing including:

(a) providing wireless connectivity directly between a first transceiver associated with said network subscriber and a second transceiver associated with a network subscriber other than said one said more than one other network subscriber, and (b) providing wireless connectivity directly between said second transceiver and a third transceiver associated with said one said more than one other network subscriber (Fig. 25; abstract; col. 20, lines 53-59; col. 33, lines 34-col. 34, lines 1-24; a wireless transceiver is placed at every integrated residence gateway ISD/IRG and/or taps at customer houses (i.e., subscriber network), so, when for example the communication of ISD 221/IRG 22-1 is lost, the transceiver 2502 becomes active to communicate with the C-FMP (i.e., service provider) through path 2506, but if path 2506 cannot be established, then it can establish a path to the C-FMP from transceiver 2502 (i.e., first transceiver) to transceiver 2503 (i.e., second transceiver) and from transceiver 2503 to transceiver 2501 (i.e., third transceiver); note that although Gerszberg teaches the forming a relaying path between three transceivers that are not all located at the gateways, one of ordinary skill in the art would recognize that the example shown by the Fig. 25 would work equally well

when locating the transceivers at the residence gateways at every house, since the transceivers have the capability of acting as relays). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify Cardina to include establishing a connection to the network service provider over a wireless connection relayed from the network subscriber through more than one other subscriber, one said more than one other network subscriber having separate normal wireline-connectivity to the network service provider, said automatically establishing including: (a) providing wireless connectivity directly between a first transceiver associated with said network subscriber and a second transceiver associated with a network subscriber other than said one said more than one other network subscriber, and (b) providing wireless connectivity directly between said second transceiver and a third transceiver associated with said one said more than one other network subscriber, as suggested by Gerszberg, since such a modification would provide the advantage for the subscribers to re-establish the communications with the service provider via alternative wireless paths when loosing their direct connection (i.e., primary wireline connection) with the service provider and when located a long distance from the service provider.

Regarding claim 17, the combination of Cardina and Gerszberg disclose the method of claim 10, in addition Cardina discloses further comprising: monitoring a failed connection state of the wireline connection for renewed connectivity of the wireline connection; and disconnecting from the wireless connection when the wireless connection is renewed (paragraph [0015]).

Regarding claim 18, Cardina discloses a method for providing fallback network connectivity to a network service provider for one of a plurality of subscriber networks, each subscriber network at a different subscriber location, said method comprising:

providing wireline-connectivity as primary network connectivity to said service provider for each of said subscriber networks (Fig.1; paragraphs [0002]; [0057]-[0058] lines 1-4; the customer premises equipments (i.e., subscriber networks) have landline connections 101 (i.e., primary wireline connection) with the public switched telephone network 108 (i.e., service provider); although only one customer premises equipment is shown, it is well known in the art that a plurality of homes have landline connections to the public switched telephone network);

and providing backup network connectivity to said one subscriber network via a wireless network for a network subscriber having a residence or place of business, said backup connectivity being provided when said wireline connectivity for said node is lost due to a problem said place of business (Fig. 1; abstract; paragraphs [0008], [0012], [0058], and [0070]-[0073]; customer premises equipment have backup device 102 that automatically provides backup service to the landline telephone equipment through a wireless telephone/network)).

But, Cardina does not particularly disclose wherein said back up network connectivity is implemented by wirelessly relaying data directly from a first transceiver associated and interfacing with said one subscriber network to a second transceiver associated and interfacing with another subscriber network in the plurality of subscriber networks which had an active wireline connection to the network service provider, said second transceiver being wirelessly connected directly to a third transceiver associated and interfacing with in yet another subscriber

network in the plurality of subscriber networks that has an active wireline connection to the network service provider.

However, Gerszberg teaches implementing a backup network connectivity by wirelessly relaying data directly from a first transceiver associated and interfacing with said one subscriber network to a second transceiver associated and interfacing with another subscriber network in the plurality of subscriber networks which had an active wireline connection to the network service provider, said second transceiver being wirelessly connected directly to a third transceiver associated and interfacing with in yet another subscriber network in the plurality of subscriber networks that has an active wireline connection to the network service provider (Fig. 25; abstract; col. 20, lines 53-59; col. 33, lines 34-col. 34, lines 1-24; a wireless transceiver is placed at every integrated residence gateway ISD/IRG and/or taps (i.e., network subscribers) at customer houses, so, when for example the communication of ISD 221/IRG 22-1 is lost, the transceiver 2502 becomes active to communicate with the C-FMP (i.e., service provider) through path 2506, but if path 2506 cannot be established, then it can establish a path to the C-FMP from transceiver 2502 (i.e., first transceiver) to transceiver 2503 (i.e., second transceiver) and from transceiver 2503 to transceiver 2501 (i.e., third transceiver); note that although Gerszberg teaches the forming a relaying path between three transceivers that are not all located at the gateways, one of ordinary skill in the art would recognize that the example shown by the Fig. 25 would work equally well when locating the transceivers at the residence gateways at every house, since the transceivers have the capability of acting as relays). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify Cardina to implement the backup network connectivity by wirelessly relaying data directly from

a first transceiver in said one node to a second transceiver in another node in the plurality of networks nodes which had an active wireline connection to the network service provider, said second transceiver being wirelessly connected directly to a third transceiver in yet another node in the plurality of nodes that has an active wireline connection to the network service provider, as suggested by Gerszberg, since such a modification would provide the advantage for the subscribers to re-establish the communications with the service provider via alternative wireless paths when loosing their direct connection (i.e., primary wireline connection) with the service provider and when located a long distance from the service provider.

Regarding claim 23, the combination of Cardina and Gerszberg disclose the method of claim 18, in addition Cardina discloses wherein providing the backup network connection includes authorizing the subscriber of the network with the network service provider (paragraph [0012]; the backup device automatically registers with the MTSO, note that registration involves authorization).

Regarding claim 24, the combination of Cardina and Gerszberg disclose the method of claim 18, in addition Cardina discloses further comprising: providing the backup network connectivity in response to a failed connection state of the wireline connection (paragraphs [0008] and [0011]).

Regarding claim 25, the combination of Cardina and Gerszberg disclose the method of claim 24, in addition Cardina discloses further comprising: monitoring failed connection state of the wireline connection for renewed connectivity of the wireline connection; and disconnecting from the backup network connectivity when the wireline connection is renewed (paragraph [0015]).

Regarding claim 26, the combination of Cardina and Gerszberg disclose the method of claim 18, in addition Cardina disclose wherein the network service provider provides Internet connectivity or telephony services (Fig. 1; the network service provider is a Public Switched Telephone Network (PSTN) that provide telephony services).

9. **Claims 14-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over CARDINA et al. in views of GERSZBERG et al., and SAWADA (US 2005/0148315 A1).

Regarding claim 14, the combination of Cardina and Gerszberg disclose the method of claim 10, but the combination does not particularly disclose wherein automatically establishing a connection to the network service provider includes broadcasting a message requesting a relay to the network service provider by the one or more other network subscribers.

However, Sawada teaches broadcasting a message requesting a relay to the network service provider by the one or more other network subscribers (paragraphs [0066]-[0067]). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the combination to include the features of broadcasting a message requesting a relay to the network service provider by the one or more other network subscribers, as suggested by Sawada, since such a modification would provide the advantage of relaying communications or the connection to the subscriber that issue the relay request (paragraph [0067]).

Regarding claim 15, the combination of Cardina, Gerszberg, and Sawada disclose the method of claim 14, in addition Cardina discloses wherein automatically establishing a connection to the network service provider further includes authorizing the subscriber to use the

network (paragraph [0012]; the backup device automatically registers with the MTSO, note that registration involves authorization).

Regarding claim 16, the combination of Cardina, Gerszberg, and Sawada disclose the method of claim 14, in addition Knight discloses wherein the relaying one or more other network subscribers forward data wirelessly from the network over a second wireless connection to the network service provider (see Fig. 1).

10. **Claim 27** is rejected under 35 U.S.C. 103(a) as being unpatentable over CARDINA et al. in views of GERSZBERG et al., and McKENNA et al.

Regarding claim 27, the combination of Cardina and Gerszberg disclose the method of claim 18, but the combination does not particularly disclose wherein the wireline network includes a fiber connection or a coaxial connection leading to a subscriber of the network service provider.

However, McKenna teaches that wirelined-based communications networks such as traditional telephone systems, Local Area Networks, and the like, can use a variety of physical media to interconnect wired subscribers devices to the wirelined-based communication network and these include: twisted pair, Ethernet, coaxial cable, fiber optic cable, DSL on twisted pair, 4-wire, and the like (col.9, lines 31-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to modify the combination in order for the wireline network to include coaxial cables, as taught by McKenna, because it is a standard material used to interconnect subscribers in a wirelined-based communication network.

11. **Claim 29** is rejected under 35 U.S.C. 103(a) as being unpatentable over FARRIS et al. in views of GERSZBERG et al., and PATRON et al. (US 2005/0063333 A1).

Regarding claim 29, the combination of Farris and Gerszberg disclose the network of claim 28, but the combination does not particularly disclose wherein the NIUs form a wireless ad-hoc network. However, Patron teaches that Ad-hoc networks usually consist of several computing devices each equipped with a wireless transceivers (paragraph [0001]). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to recognize that an ad-hoc network may form between the plurality of NIUs, as taught by Patron, because an Ad-hoc network usually consists of devices comprising wireless transceivers and each NIU comprises a wireless transceiver.

12. **Claims 13 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over CARDINA et al. in views of GERSZBERG et al., and further in view of well known prior art (MPEP 2144.05).

Regarding claims 13 and 22, the combination of Cardina and Gerszberg disclose the method of claims 10 and 18, but the combination does not particularly disclose wherein the wireless network is formed in accordance with IEEE 802.11 wireless connectivity standards. The Examiner takes official notice of the fact that is notoriously well known in the art that the IEEE 802.11 standard is a wireless network technology. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to form a wireless network in accordance with IEEE 802.11 standards in Cardina's invention since is one of a variety of wireless networks available to create wireless local area networks and more cost effective compared to other wireless networks.

13. **Claim 34** is rejected under 35 U.S.C. 103(a) as being unpatentable over KNIGHT (US 2007/0060202) in view of GERSZBERG et al.

Regarding claim 34, Knight discloses a method for maintaining wireline communication comprising:

providing first wireline communication and first wireless communication between a first subscriber network of a first network subscriber and a network service provider (Fig. 1, i.e., cell site 119 connected to antenna unit 116; paragraphs [0023], [0027], and [0028]; cell site 119 connected to antenna unit 116 (i.e., first network subscriber) when "on the air" has a connection with the MTSO (i.e., network service provider) over a wired medium 100, but when "off the air" the cell site 119 reestablish communications with the MTSO via a wireless connection through antenna unit 116; the antenna unit 116 is connected to the house thus interfaces the subscriber network);

providing second wireline communication and second wireless communication between a second subscriber network of a second network subscriber and said network service provider (Fig. 1, cell site 101 connected to antenna unit 109; cell site 101 connected to antenna unit 109 (i.e., second network subscriber) has a connection with the MTSO (i.e., network service provider) over a wired medium 100) due to a problem inside premises of said first network subscriber (Fig. 1; paragraph [0023]; the subscriber cell 119 becomes disconnected or "off the air" when a cable 127 is cut in the subscriber premises as seen in the figure); and

providing, when said first wireline communication fails, substitute wireline communication for said first network subscriber by way of said second wireline communication by wirelessly relaying data between two nodes, one of said nodes located in said first subscriber network on said premises of said first network subscriber and the other of said two nodes located in said second subscriber network on premises

of said second network subscriber, said other of said nodes relaying said data with said network service provider over a wireline otherwise normally carrying only said second wireline communication (Fig. 1; paragraphs [0023], [0027], and [0028]; cell site 119 connected to antenna unit 116 (i.e., first network subscriber) when “on the air” has a connection with the MTSO (i.e., network service provider) over a wired medium 100, but when "off the air” the cell site 119 reestablish communications with the MTSO relayed from cell site 101 and antenna unit 109 (i.e., substitute wireline connection with the MTSO)).

But, Knight does not particularly disclose wirelessly relaying data indirectly between two nodes through a third node associated with a third network subscriber, said one node having a first transceiver, said other node having a second transceiver and said third node having a third transceiver, wherein wirelessly relaying data includes said first transceiver wireless communicating directly with said third transceiver and said third transceiver wirelessly communicating directly with said second transceiver.

However, Gerszberg discloses wirelessly relaying data indirectly between two nodes through a third transceiver associated with a third network subscriber (Fig. 25; abstract; col. 20, lines 53-59; col. 33, lines 34-col. 34, lines 1-24; a wireless transceiver is placed at every integrated residence gateway ISD/IRG and/or taps (i.e., network subscribers) at customer houses, so, when for example the communication of ISD 221/IRG 22-1 is lost, the transceiver 2502 becomes active to communicate with the C-FMP (i.e., service provider) through path 2506, but if path 2506 cannot be established, then it can establish a path to the C-FMP from transceiver 2502 (i.e., first transceiver) to transceiver 2503 (i.e., third transceiver) and from transceiver 2503 to transceiver 2501 (i.e., second transceiver); note that although Gerszberg teaches the forming a

relaying path between three transceivers that are not all located at the gateways, one of ordinary skill in the art would recognize that the example shown by the Fig. 25 would work equally well when locating the transceivers at the residence gateways at every house, since the transceivers have the capability of acting as relays). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify Knight to include wirelessly relaying data indirectly between two nodes through a third transceiver associated with a third network subscriber, as suggested by Gerszberg, since such a modification would provide the advantage for the subscribers to re-establish the communications with the service provider via alternative wireless paths when loosing their direct connection (i.e., primary wireline connection) with the service provider and when located a long distance from the service provider.

14. **Claim 36** is rejected under 35 U.S.C. 103(a) as being unpatentable over FARRIS et al. in views of GERSZBERG et al., and CHENG et at. (US 2002/0187746).

Regarding claim 36, the combination of Farris and Gerszberg disclose the network of claim 28, in addition Farris discloses wherein said wireline connections are all connected to network control (Fig. 1; the wireline connection of wireline subscribers are connected to end office switching system (i.e., network control)).

But, the combination does not particularly disclose wherein said wireless transceiver broadcasts a connect message to be received by at least a subset of said plurality of subscribers; one subscriber in said subset is first in said subset to relay said received message to said network control via a wireline connection; and said network control picks a transceiver included in an NIU of said one subscriber as said yet another wireless transceiver.

However, Cheng teaches a first wireless transceiver broadcasting a connect message to be received by at least a subset of a plurality of subscribers and selecting one of the transceivers that received the message as the relay transceiver (i.e., the yet another transceiver) (paragraphs [0034]-[0037]; the requesting UE (i.e., first transceiver) sends a relay request signal (i.e., connect message) and receive a plurality of responses from other UEs, then a UE is selected to act as the relay for the connection to the BS, then the BS (i.e., control node) confirms the selection of the relay UE). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention, to modify the combination to include a first wireless transceiver broadcasting a connect message to be received by at least a subset of a plurality of subscribers and selecting one of the transceivers that received the message as the relay transceiver (i.e., the yet another transceiver), as suggested by Cheng, in order to successfully set up a relaying link to the service provider.

Allowable Subject Matter

15. Claims 38-40 and 45-47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARISOL FIGUEROA whose telephone number is (571)272-7840. The examiner can normally be reached on M-F 8:30 a.m.-5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jinsong Hu can be reached on (571)272-3965. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/MARISOL FIGUEROA/
Examiner, Art Unit 2617